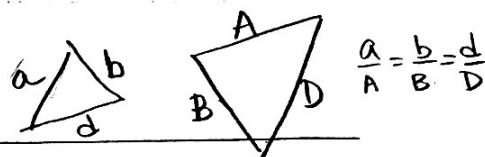


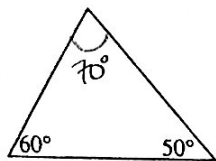
same shape, not nec. same size  
 corresponding  $\angle$ s are equal  
**SIMILAR POLYGONS** + side ratios are equal



1. State why the two polygons are or are not similar.

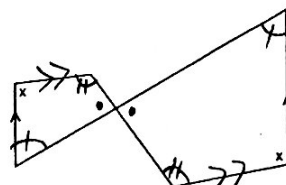
find angles

a) Similar



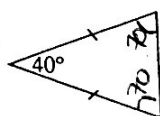
all  $\angle$ s are equal

b) Similar



all  $\angle$ s are =  
 (use parallel to see which  $\angle$ s are =)

c) Similar

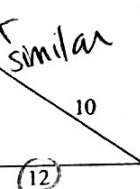


all  $\angle$ s are equal

d) Similar



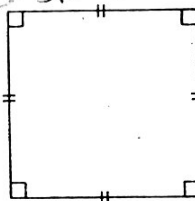
e) not similar



$$\frac{12}{18} \neq \frac{8}{10} \neq \frac{10}{15}$$

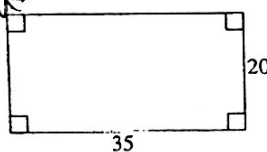
$$\frac{2}{3} \neq \frac{4}{5} \neq \frac{2}{3}$$

f) Similar



$$\frac{10}{13} = \frac{10}{13} \dots$$

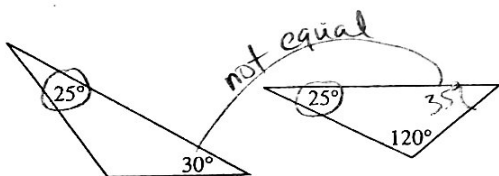
not similar



$$\frac{8}{20} \neq \frac{20}{35}$$

$$\frac{2}{5} \neq \frac{4}{7}$$

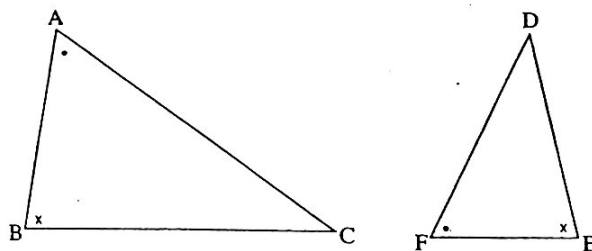
not similar



not equal

2. Complete each statement for the following pairs of similar figures.

a)



$$\triangle ABC \sim \triangle FED$$

$$\frac{AB}{FE} = \frac{BC}{ED} = \frac{AC}{FD}$$

$$\frac{AB}{FE} = \frac{BC}{ED} = \frac{AC}{FD}$$

$$\frac{6}{9} = \frac{8}{12} = \frac{10}{15}$$

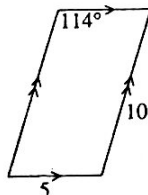
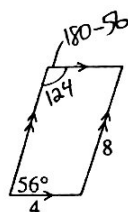
$$\frac{2}{3} = \frac{2}{3} = \frac{2}{3}$$

$$c^2 = 9^2 + 12^2$$

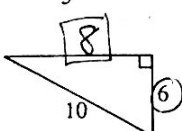
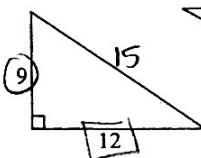
$$10^2 = a^2 + b^2$$

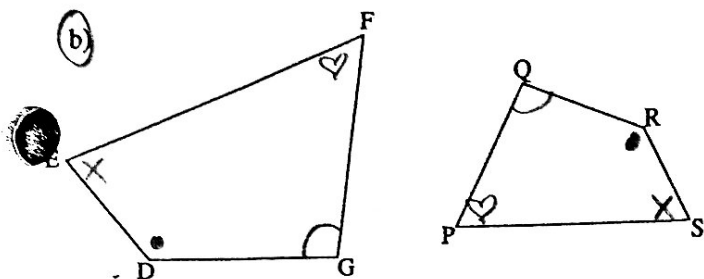
diff angles

not similar



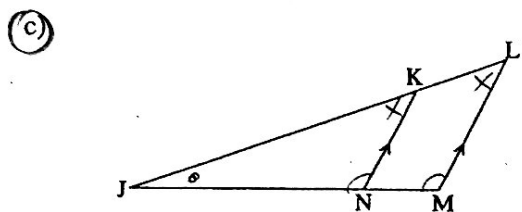
similar





$$DEFG \sim RXPQ$$

$$\frac{FG}{PQ} = \frac{GD}{QR} = \frac{DE}{RS} = \frac{FE}{PS}$$



$$\triangle JKN \sim \triangle JLM$$

$$\frac{JK}{JL} = \frac{KN}{LM} = \frac{JN}{JM}$$

3. Complete the following statement.

If  $\triangle DHG \sim \triangle MPT$ , then

$$\frac{HG}{PT} = \frac{DG}{MT} = \frac{DH}{MP}$$

4. Use the ratios of the corresponding sides to calculate the unknown lengths in the following similar figures. (All measurements are in cm.)

Work in your notebook.

$$\frac{0.75}{8} = \frac{0.75}{9} = \frac{0.75}{10}$$

